

Mechanics of Fracture Initiation in Polycarbonate

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Today's talk will focus on exploring the mechanics of fracture initiation in amorphous glassy polymers (especially in Polycarbonate). Polycarbonate (PC), is a tough polymer used in several applications where impact loading is dominated. However, for PC, fracture initiation under dynamic conditions is relatively less understood than the fracture propagation. We performed fracture experiments on PC under static as well as dynamic loading. The fracture process near the notch is observed in real-time, bringing new insights into the process, which allows us to understand the mechanics behind fracture initiation better.